

Date: Thursday, 31/07/2008 1:32:46 PM  
 User: Julie Lecocq

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services  
 Job Number : 40860  
 Estimate Number : 11198  
 P.O. Number :  
 This Issue : 31/07/2008 S.O. No. :  
 Prsht Rev. : NC  
 First Issue : 31/07/2008 Type : MACHINED PARTS  
 Previous Run : 40188  
 Written By :  
 Checked & Approved By : JLD 08.8.01  
 Comment : Est: C 04.11.17 Step 13 revised KJ/JLM

Drawing Name : TUBE ASSEMBLY  
 Part Number : D3304041  
 Drawing Number : D3304 REV. B  
 Project Number : N/A  
 Drawing Revision : B  
 Material :  
 Due Date : 08/08/2008

Qty: 14 Um: Each

*enough  
not enough  
mat.*  
 (6)

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M304TR0875W065 304 round tube .875 x .065w



Comment: Qty.: 1.4109 f(s)/Unit Total: 19.7524 f(s)  
 Material: AISI 304/316 SS tubing 0.875" x 0.065" wall  
 (M304TR0.875W.065)  
 Identify for D3304-1  
 Batch: M108732 x (5) (6)

J.F. 08/08/05

2.0 BAND SAW BAND SAW



Comment: BAND SAW  
 Cut to length

J.F. 08/08/05

3.0 LATHE CONV. CONVENTIONAL LATHE



Comment: CONVENTIONAL LATHE  
 Cut blank: 15.75" as per Dwg D3304  
 Turn as per Dwg D3304  
 Identify as D3304-1

J.F. 08/08/05

4.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

J.F. 08/08/05

5.0 QC8 SECOND CHECK



Comment: SECOND CHECK

*08.08.06* (6)

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Thursday, 31/07/2008 1:32:46 PM  
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Drawing Name: TUBE ASSEMBLY

Job Number: 40860

Part Number: D3304041

Job Number:



Seq. #: Machine Or Operation: Description :

6.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Deburr

Drill as per Dwg D3304 using drill Jig D3304-T1

Deburr

SAP 08/08/25

6

7.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/08/25 (6)

8.0

D33045

Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total: 14.0000 Each(s)

Bracket

Pick:

Qty Part Number Description Batch  
1 D3304-5 Bracket

340203 ✓

Cpl 08-08-27

(X6)

9.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld bracket as per Dwg D3304 and QSI 004

Cpl 08-08-27 (X6)

10.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

PD 08-08-28 (6)

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/08/27 (6)

12.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

9:00  
320  
9:30

M-H

08/08/29

(6X)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 31/07/2008 1:32:46 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 40860

Part Number: D3304041

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

08-08-29

(5)

14.0

BLBS0016

PIP PIN



Comment: Qty.: 1.0000 Each(s)/Unit Total: 44.0000 Each(s)

PIP PIN

Pick:

Qty Part Number Description Batch  
1 BLBS-0016 Pip Pin

6.0000  
M108665x4 - gone to  
M108910x2

gene to  
lala land m.f

FF 08/09/04

(6)

15.0

CBL460

Loop Sleeve



Comment: Qty.: 2.0000 Each(s)/Unit Total: 28.0000 Each(s)

Loop Sleeve

Pick:

Qty Part Number Description Batch  
2 CBL-460 Loop Sleeve

12.000  
M107234

FF 08/09/04

(6)

16.0

CBL1240

Cable



Comment: Qty.: 1.0417 f(s)/Unit Total: 14.5838 f(s)

Cable

Pick:

Qty Part Number Description Batch  
12.5" CBL-1240 Cable

6.2502

M103927

FF 08/09/04

(6)

17.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble lanyard and pip pin as per Dwg D3304

FF 08/09/04

(6)

18.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/09/04

19.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify with P/N and B/N as per Dwg using a permanent fine point marker, then Stock

Location:

ST 188

08/09/04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 31/07/2008 1:32:46 PM  
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 40860

Part Number: D3304041

Job Number:



Seq. #:

Machine Or Operation:

Description :

20.0

QC21

FINAL INSPECTION/W/O RELEASE



08/09/05

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-09-05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

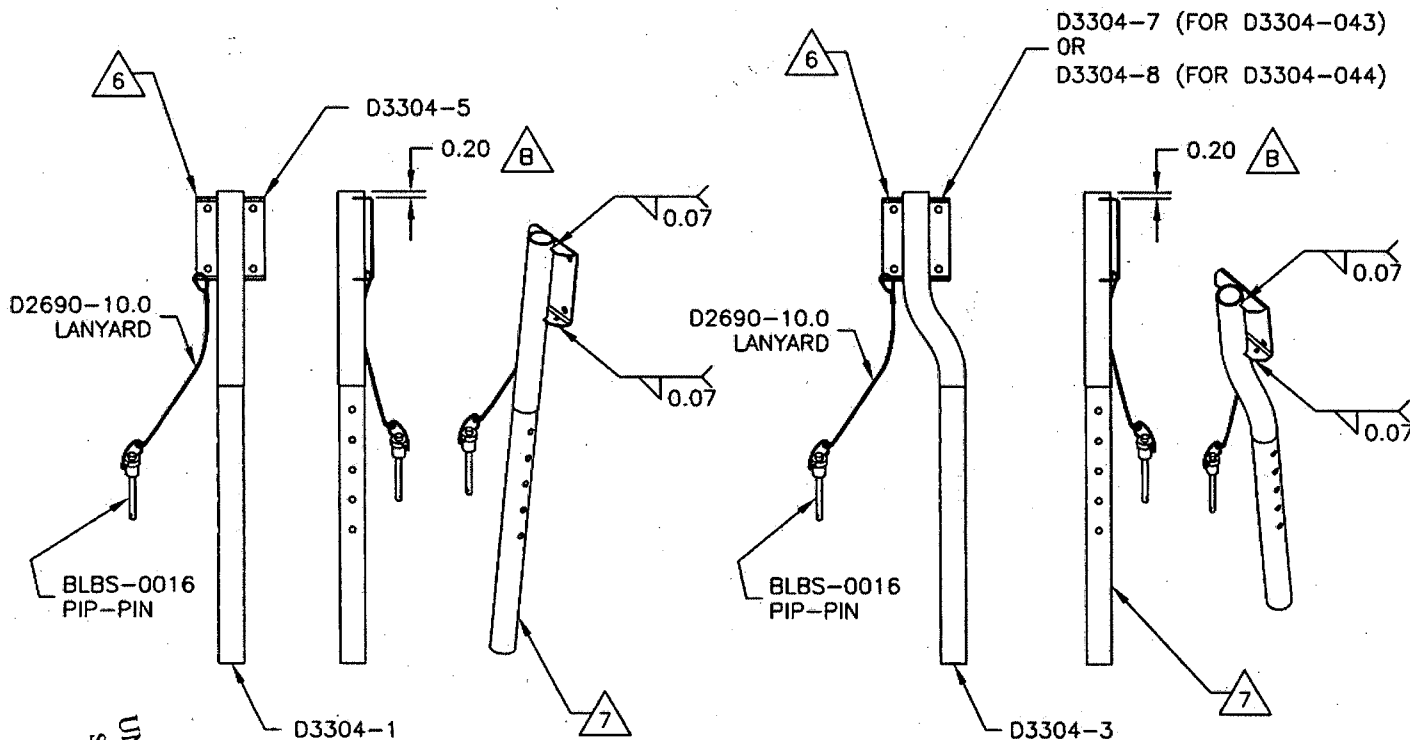
**NOTE:** Date & initial all entries







DESIGN	RF	DRAWN BY	RF	DART AEROSPACE LTD
CHECKED		APPROVED		HAWKESBURY, ONTARIO, CANADA
DATE	05.07.15	TITLE	D3304	REV. B
			TUBE ASSEMBLY	SHEET 1 OF 4
A	04.08.18	NEW ISSUE		SCALE
B	05.07.15	UPDATE DIMENSIONS: ADD D3304-7/-8		1:6



**D3304-044 TUBE ASSEMBLY (SHOWN)**  
**D3304-043 OPPOSITE**

**D3304-041/-043/-044 NOTES:**

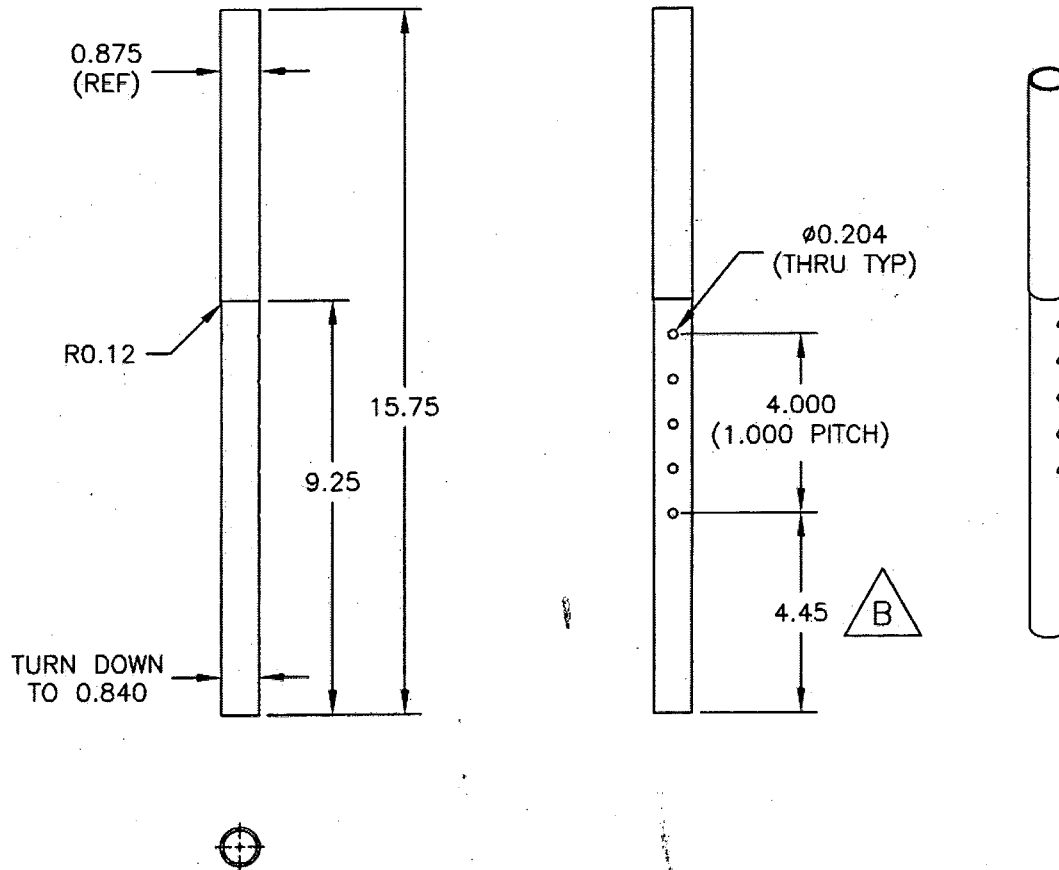
- 1) FINISH: POWDER COAT GREY SANTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 2) WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) IDENTIFY AS INDICATED USING FINE POINT PERMANENT INK MARKER "TCCA-PDA, DART AEROSPACE LTD, P/N D3304-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"
- 7) IF BEING ASSEMBLED WITH D3303-041, ADD THE FOLLOWING USING A FINE POINT PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD, P/N D412-724-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

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RELEASED  
05.08.11

**DART**

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DATE 05.07.15	TITLE TUBE ASSEMBLY		SCALE 1:4

**RELEASED**  
05.08.11 *[Signature]***D3304-1 TUBE****D3304-1 NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE  $\phi 0.875 \times 0.065$  WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

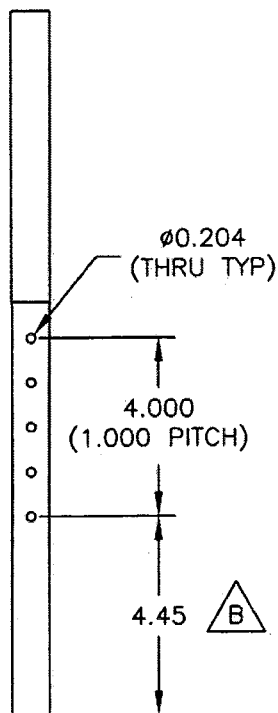
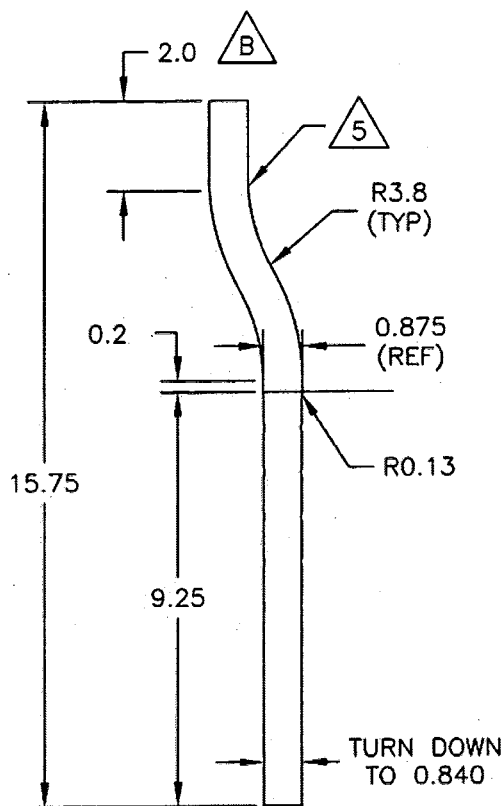
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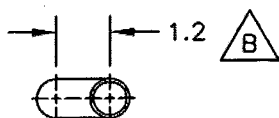
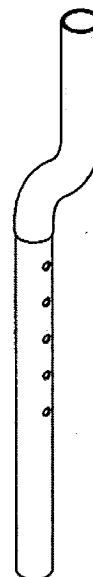
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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 3 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4



RELEASED  
05-08-11 *[Signature]*



### D3304-3 TUBE

#### D3304-3 NOTES:



- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE  $\phi 0.875 \times 0.065$  WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) BEND LINES 9.625, 13.375 DIMENSIONS.

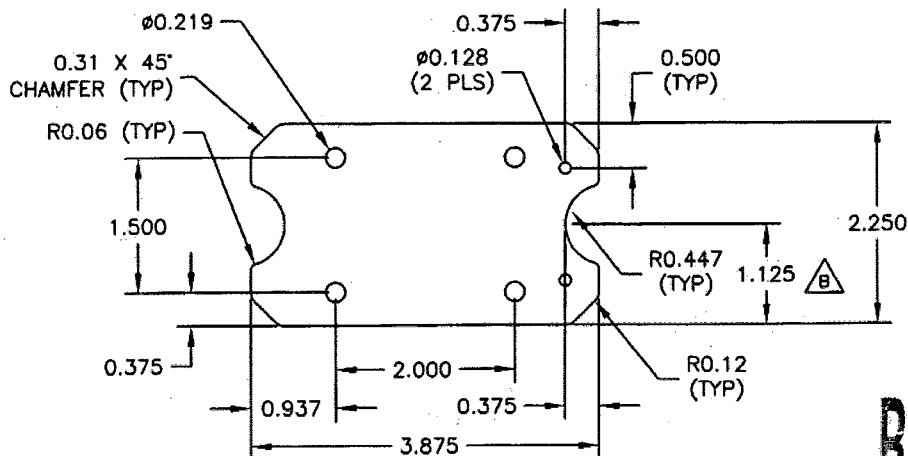
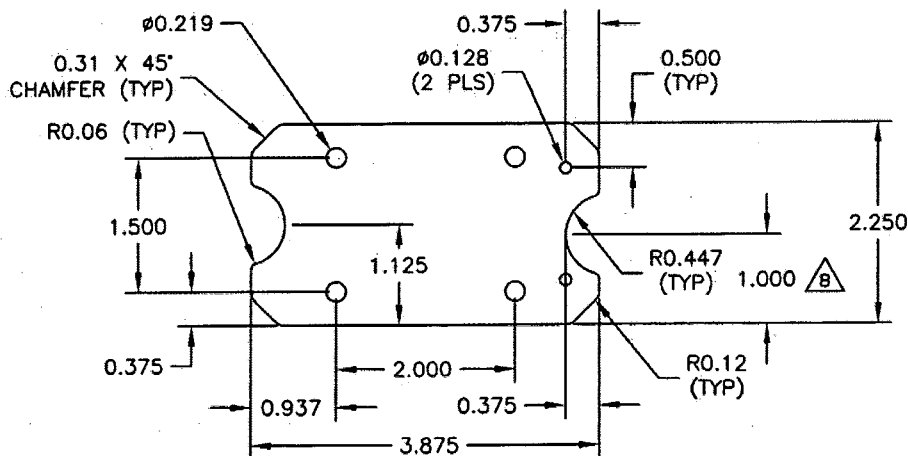
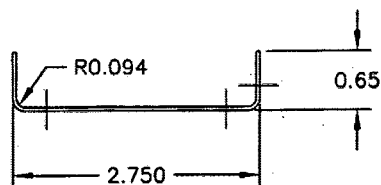
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DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 	APPROVED 	DRAWING NO. D3304	REV. B SHEET 4 OF 4
DATE 05.07.15	TITLE TUBE ASSEMBLY		SCALE 1:2

**D3304-5 FLAT PATTERN****RELEASED**  
05-08-11**D3304-7/-8 FLAT PATTERN****D3304-5/-7 BRACKET  
D3304-8 OPPOSITE**

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NO. 440860

**NOTES:**

- 1) MATERIAL: AISI 304/316 SS 0.040 THICK SHEET (REF. DART SPEC M304S20GA)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

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